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10/796,806	03/09/2004	James H. Mabe	7784-000704US	2080

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EXAMINER	
WILLIAMS, MARK A	
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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
2 MONTHS	12/21/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/796,806
Filing Date: March 09, 2004
Appellant(s): MABE, JAMES H.

Mark D. Elchuk
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/22/06 appealing from the Office action mailed 1/18/06

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

Claims 1-35 have been canceled.

This appeal involves claims 35-45.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Japanese Patent	JP 08228910 A	9-1996
US 5,617,377	Perret, Jr.	4-1997

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 35-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "the piano hinge leafs do not pivot about the SMA pin but pivot when a torque is applied" is not fully understood. It is unclear how this can occur, since even when the hinge pin twists to cause pivoting, the leafs would pivot about the pin, at least partially.

Regarding claims 41-45, use of the term NiTinol renders the claims indefinite, since applicant's brief (page 11, last paragraph) appears to suggest that NiTinol is a trademark. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See Ex parte Simpson, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain

since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe and, accordingly, the identification/description is indefinite

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 35 and 36, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent JP 408228910 A ('910). A hinge apparatus comprising a hinge pin 7 formed of a two-way shape memory alloy (SMA) adapted to transition, without an externally applied load, between a first trained shape and a second trained shape upon switching the two-way SMA between a first state and a second state, wherein switching the two-way SMA from the first state to the second state causes the hinge apparatus to apply an opening force to a device

coupled to the hinge apparatus, and wherein switching the two-way SMA from the second state to the first state causes the hinge apparatus to apply a closing force to the device coupled to the hinge apparatus. First and second states of austenitic state and martensitic states, responsive to temperature as claimed, are inherent to the design, as known in the art. Twisting of the pin as claimed would inherently occur. Member 2 is broadly considered a door. The device could be formed by thermal cycling, as claimed. The device can be broadly considered a piano hinge. A key-spline arrangement rigidly securing the two-way shape memory alloy to the hinge leafs for transfer of torque from the two-way SMA. The ends of the pin including tabs for transferring torque, as claimed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 41-43, and 45, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent JP 408228910 A ('910) in view of Perret, Jr., US Patent 5,617,377. Patent '910 discloses the claimed invention

except for the SMA material being NiTinol. However, it is known in the art of shape memory alloys to use such material as NiTinol to achieve desired results, as taught by Perret, Jr. Such material is known for its shape memory characteristics that allows for the alloy to return from a deformed shape to a preset shape as a result of temperature changes (see column 5, lines 12-21 of Perret). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use such material, for the purpose of selecting a known SMA material that would allow for the pin to return from a deformed shape to a preset shape as a result of temperature changes, thereby achieving the aims of the device.

Claims 37-40 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent JP 408228910 A ('910). Patent '910 discloses the claimed invention except for the particular range of cycling. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device in such a way, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Such a modification would solve no stated problem and would have produced no unexpected results.

(10) Response to Argument

Applicant argues that claims 35-45 are not indefinite in view of the language added to independent claims 35 and 41. Applicant states that the hinge leafs 112, 116 will only be able to pivot in response to the twisting of the SMA hinge pin 104; thus pivoting movement of the hinge 100 is controlled by the twisting action of the SMA pin 104. Although this may properly explain the functioning of the disclosed hinge device, the claim language does not clearly state this functionality and is still considered indefinite. As stated in the above 112 rejection, the leafs will pivot about the pin during the twisting action.

Applicant argues that JP '910 would not allow the SMA pin to positively urge the cover back into the closed position. Applicant states that the intention of JP '910 is for a user to be able to manually pivot the cover about the pins 7 without twisting the pins, since the pins are not rigidly secured to the leaves. However, this is not what JP '910 discloses. Claim 1 of JP '910 states "the lid opening-and-closing member made from a shape memory alloy which is placed between the pan body and the opening-and-closing part between lids, and makes a lid open and close automatically". Hence clearly the arrangement of JP '910 allows for opening and closing as claimed by the present invention. In addition, one of ordinary skill in the art would recognized that the pin is indeed rigidly attached to the leaves in

order to provided to appropriate opening and closing twisting, and this can be seen in the figures. The claims are not distinguishable over the applied art.

Applicant argues that the hinge of JP '910 absolutely requires the cover to be able to pivot freely relative to the pot at all times, which is fundamentally different from applicant's invention where the hinge cannot be allowed to pivot freely unless pivoting of the hinge leafs is caused by twisting of the SMA pin. However, as understood, the claims do not state this particular limitation with respect to the pin only being rotatable by the SMA pin twisting. No claim language has been provided distinguishing applicant's claimed invention over the applied art.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section **(9)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

Mark Williams

A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

Don Hajec

Conferees:

Brian Glessner B.G.

Meredith Petravick MP